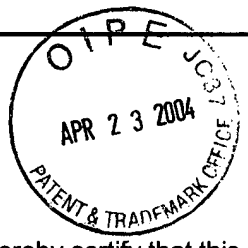
CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8) Applicant(s): **CHEN et al.**			Docket No. **API-0002**
Serial No. **10/716,175**	Filing Date **11/18/2003**	Examiner **Charanjit Aulakh**	Group Art Unit **1625**

Invention: **SUBSTITUTED ARYL THIOUREAS AND RELATED COMPOUNDS; INHIBITORS OF VIRAL REPLICATION**



I hereby certify that this **Trans. of IDS (2 pgs), IDS (2 pgs), PTO-A820 (2 pgs), Cited Art (14 refs), postcard**
(Identify type of correspondence)

is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on **April 21, 2004**
(Date)

Laura J. Nolan
(Typed or Printed Name of Person Mailing Correspondence)

Laura J. Nolan
(Signature of Person Mailing Correspondence)

Note: Each paper must have its own certificate of mailing.

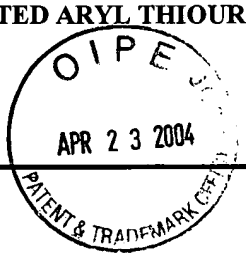
P07A/REV03

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. API-0002

In Re Application Of: **CHEN et al.**

Serial No.	Filing Date	Examiner	Group Art Unit
10/716,175	11/18/2003	Charanjit Aulakh	1625

Title: **SUBSTITUTED ARYL THIOUREAS AND RELATED COMPOUNDS; INHIBITORS OF VIRAL REPLICATION**



Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

37 CFR 1.97(b)

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

37 CFR 1.97(c)

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

   ☐ the statement specified in 37 CFR 1.97(e);

   OR

   ☐ the fee set forth in 37 CFR 1.17(p).

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. API-0002

In Re Application: **CHEN et al.**

Serial No.	Filing Date	Examiner	Group Art Unit
10/716,175	11/18/2003	Charanjit Aulakh	1625

SUBSTITUTED ARYL THIOUREAS AND RELATED COMPOUNDS; INHIBITORS OF VIRAL REPLICATION

Payment of Fee

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

☐ A check in the amount of is attached.

☒ The Director is hereby authorized to charge and credit Deposit Account No. **06-1130** as described below.

- ☐ Charge the amount of
- ☒ Credit any overpayment.
- ☒ Charge any additional fee required.

Certificate of Transmission by Facsimile*

I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (F:

_____
(Date)

Signature

Typed or Printed Name of Person Signing Certificate

Certificate of Mailing by First Class Mail

I certify that this document and fee is being deposited on **April 21, 2004** with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Laura J. Nolan

Signature of Person Mailing Correspondence

Laura J. Nolan

Typed or Printed Name of Person Mailing Certificate

***This certificate may only be used if paying by deposit account.**

L. Horvath

Signature

Dated: **April 21, 2004**

Leslie-Anne Horvath
Reg. No. 44,778
Customer No. 23,413
(860) 286-2929

cc:

API-0002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Dawei CHEN, et al.	)	
	)	Group Art Unit: 1625
Serial No.: 10/716,175	)	
	)	
Filed: 11/18/03	)	Examiner: Charanjit Aulakh
	)	
For: SUBSTITUTED ARYL THIOUREAS AND RELATED COMPOUNDS; INHIBITORS OF VIRAL REPLICATION	)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.56, 1.97 AND 1.98

Dear Sir:

In compliance with the duty to disclose, submitted herewith is form PTO-A820 (PTO-1449) listing publication(s) of which those designated by 37 CFR § 1.56 are aware. Copies of the non-United States patents or published applications are enclosed.

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made, or an admission that the information cited is, or is considered to be, material to patentability.

Some of the documents listed on attached Form PTO-1449 are not in English. As required by 37 C.F.R. §1.98(a)(3) applicants have provided below a concise explanation of the relevance of each listed reference that is not in the English language.

Schuster, G., "Structurally Dependent Effect of Substituted Thioureas on the Concentration of Potato Virus X in *Nicotiana tabacum* L." Zentrallblatt fuer Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, Abteilung 2, Naturwissenschaftliche: Microbgiolgia der Landwirtschaft, der Technologie und des Umweltschutzes (1978), 133(7-8), 686-9 is in German. Applicants do not have a translation of this document, but understand it to be directed to the effects of substituted thioureas on potato virus. Applicants understand the substituted thioureas disclosed in the reference differ substantially in structure from those of the

application. For example, of the thiourea compounds disclosed on page 688 of the reference only the last three compounds in the second column contain a carbonyl thiourea group. The carbonyl thiourea compounds of the reference differ from those of the application by not having a second cyclic group (such as an aromatic group), and alkyl amino group, or an alkylaminoalkyl group.

Mitin, N. I. et al., "Effect of Adamantine-containing Compounds on Aujesky's and Avian Influenza Disease Viruses," Fiziologicheski Aktivnye Veshchestva (1977) 9, 31-5 is in Russian. Applicants do not have a translation of this document but understand it to pertain to compounds that differ substantially from those of the present application. For example the reference appears to pertain only to adamantane-containing compounds.

Parceus, C. et al., "Inhibition of vaccinia virus in vitro by substituted monophenylthioureas," Naturwissenschaften (1964) 51(4), 94-5 is in German. Applicants do not have a translation of this reference but understand it to pertain to compounds that differ substantially from those of the present application. The reference apparently discloses only monophenyl thiourea compounds substituted with alkoxy groups of increasing carbon chain length (see col. 2 page 94).

Respectfully submitted,

CANTOR COLBURN LLP

By: _____
Leslie Anne Horvath
Reg. No. 44,778

Date: April 21, 2004
Customer No. 23,413
(860) 286-2929

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)	Application Number
API-0002	10/716,175
Applicant(s)	
CHEN, et al.	
Filing Date	**Group Art Unit**
November 18, 2003	1625

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		4,338,257	07/06/1982	Patel			
		4,602,109	07/22/1986	Chou et al.			
		4,638,088	01/20/1987	Chou et al.			
		4,774,260	09/27/1988	Sirrenberg et al.			
		4,873,264	10/10/1989	Chou et al.			
		4,880,838	11/14/1989	Chou et al.			
		5,135,953	08/04/1992	Potter et al.			
		5,874,615	02/23/1999	Verbrugge et al.			
		US 2003/0125318 A1	07/03/2003	Alanine et al.			

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	1	Ludovici, Donald W., et al., "Evolution of Anti-HIV Drug Candidates. Part 1: From Alpha-Anilinophenylacetamide (Alpha-APA) to Imidoyl Thiourea (ITU)", Bioorganic & Medicinal Chemistry Letters (2001), 11(17), 2225-2228
	2	Daugulis, O., et al., "N-(3-Acetyl-2,2-Dimethylcyclobutyl)Acetyl-N'-Alkyl(ARYL)Thioureas", Latvijas Kimijas Zurnals (1993), (6), 714-19

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)	Application Number
APH-0002	10/716,175
Applicant(s)	
CHEN, et al.	
Filing Date	**Group Art Unit**
November 18, 2003	1625

*EXAMINER INITIAL		OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*
	3	Schuster, Gottfried, et al., "Structurally Dependent Effects of Substituted Thioureas on the Concentration of Potato Virus X in Nicotiana tabacum L. "Samsun"", Zentralblatt fuer Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, Abteilung 2, Naturwissenschaftliche: Mikrobiologie der Landwirtschaft, der Technologie und des Umweltschutzes (1978), 133(7-8), 686-9
	4	Mitin, N. I., et al., "Effect of Adamantine-Containing Compounds On Aujeszky's And Avian Influenza Disease Viruses", Fiziologicheski Aktivnye Veshchestva (1977), 9, 31-5
	5	Mishra, Vibha, et al., "Synthesis Of Aryl Semicarbazone Of 4-aminoacetophenone And Their Anti-HIV Activity", Pharmaceutica Acta Helvetiae (1998), 73(4), 215-218
	6	Misra, Vinay S., et al., "Potential Antiviral And Antituberculous Compounds, II. N-(2-Dibenzothiophenyl)-N'-alkyl and N'-aryl Thioureas, N-(2-Dibenzothiophenyl) and N-(2-Dibenzothiophenyl-5-dioxide) Amidines", Journal fuer Praktische Chemie (Leipzig) (1967), 36(5-6), 256-9
	7	Praceus, C., et al., "Inhibition Of Vaccinia Virus In Vitro By Substituted Monophenylthioureas", Naturwissenschaften (1964), 51(4), 94-5 (with enlargements)
	8	Weinstein, Louis, et al., "Studies On The Antiviral Activity Of Urea Derivatives", Antibiotics and Chemotherapy (1957), 7 443-8
	9	Rashan, Luay J., et al., "Synthesis And Biological Evaluation Of N-Salicyloyl-N-Benzyl Thiourea And 2,2-Dimethyl-4-Oxo-6-Methoxy benzo-1,3-Dioxin", Farmaco (1991), 46(5), 677-83
	10	Bloom, Jonathan D., et al., "Thiourea Inhibitors Of Herpes Viruses. Part 1: Bis-(aryl)Thiourea Inhibitors Of CMV", Bioorganic & Medicinal Chemistry Letters 13 (2003) 2929-2932
	11	Rasmussen, C.R., et al., "Improved Procedures For The Preparation Of Cycloalkyl-, Arylalkyl-, and Arylthioureas", Department of Chemical Research, Janssen Research Foundation, June 1988, 456-459
	12	JP61106551, Diphenyl Ether Derivative, Its Preparation, Insecticide Containing Same As An Active Ingredient (abstract)
	13	JP56025148, N-Benzoyl-N'-Phenoxyphenylurea-Based Compound, Andinsecticide Comprising It (abstract)
	14	CN1183409 Insecticidal Acaricidal Pyrazoles Compounds And Preparation Thereof (abstract)

EXAMINER	DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.